AMENDMENT

CLAIMS

1. (Original) A screen printable hydrogel composition comprising:
   (a) A soluble or partially soluble polymer wherein said polymer is a copolymer, interpolymer or mixture thereof;
   (b) initiation system;
   (c) thickener;
   (d) water; and
   (e) solvent;
   with the proviso that the composition has a viscosity of greater than about 10 Pa.s.

2. (Original) The composition of Claim 1 wherein said polymer is a photocrosslinkable polymer which is a copolymer, interpolymer or mixture thereof, wherein each copolymer or interpolymer comprises (1) a nonacidic comonomer comprising a C_{1-10} alkyl acrylate, C_{1-10} alkyl methacrylate, styrenes, substituted styrenes or combinations thereof; (2) an acidic comonomer and its salts comprising ethylenically unsaturated carboxylic acid containing moiety, wherein 2-25% of the carboxylic acid containing moiety is reacted with a reactive molecule having a first and second functional unit, wherein the first functional unit is a vinyl group and the second functional unit is capable of forming a chemical bond by reaction with the carboxylic acid moiety; (3) third comonomer units formed from the reacted portion of acidic comonomers; and (4) a nonacidic comonomer comprising C1-10 alkyl or alkoxy methacrylate or acrylate.

3. (Original) The composition of Claim 2 wherein the vinyl group is selected from a methacrylate, acrylate group or mixtures thereof.

4. (Original) The composition of Claim 2 wherein the second functional unit is selected from an epoxide, alcohol, amine or mixtures thereof.

5. (Original) The composition of any one of Claims 1-4 further comprising a monomer.

6. (Original) The composition of Claim 5 wherein said monomer is selected from the group comprising polyoxyethylated trimethylolpropane triacrylate, ethylated pentaerythritol triacrylate, dipentaerythritol monohydroxypentaacrylate, 1,10-decanediol dimethlacrylate and mixtures thereof.

7. (Currently amended) The composition of any ~~one of Claims 1-6~~ Claim 5 in which the solvent is selected from the group comprising carbitol acetate, ethanol, methyl ethyl ketone, acetone, and mixtures thereof.

8. (Currently amended) The composition of ~~any of Claims 1-7~~ Claim 5 wherein the thickener is selected from the group comprising polyvinyl pyrrolidone, fumed silica, polyethylene oxide, carboxymethyl cellulose, polyvinyl pyrrolidone/vinyl acetate copolymer, and mixtures thereof.

9. (Currently amended) The composition of ~~any one of Claims 1-8~~ Claim 5 further comprising an additive selected from the group comprising humectants, surfactants, biocides, preservatives and combinations thereof.

10. (Currently amended) The composition of ~~any one of Claims 1-9~~ Claim 5 further comprising an ionic component.

11. (Currently amended) The composition of ~~any of Claims 1-10~~ Claim 5 which is in the form of a paste suitable for screen printing.

12. (Withdrawn) A method of producing a processed hydrogel film comprising:
(a) providing a screen printable hydrogel composition;
(b) providing a substrate;
(c) depositing the composition in (a) onto said substrate via screen printing techniques; and
(d) processing said composition on said substrate to form a hydrogel film.

13. (Withdrawn)A method of producing a processed hydrogel film:
(a) providing the composition of any one of Claims 1-11;
(b) providing a substrate;
(c) depositing the composition in (a) onto said substrate via screen printing techniques; and
(d) processing said composition on said substrate to form a hydrogel film.

14 (Withdrawn)A hydrogel film formed by the method of Claim 13.

15 (Currently amended) An electrode utilizing the composition of ~~any one of Claims 10 or 11~~ Claim 10.

16 (Currently amended) An electrode utilizing ~~the hydrogel film formed by the method of Claim 13~~ a hydrogell film produced by the following steps:

a. providing the composition of Claim 5;
b. providing a substrate;
c. depositing the composition in (a) onto said substrate via screen printing techniques; and processing said composition on said substrate to form a hydrogel film.

17 (New) An electrode utilizing the composition of Claim 11.